In the Drawings:

None

REMARKS

This request for reconsideration is in response to the Examiner's Office Action dated 4/20/2005. Reconsideration of this application is respectfully requested in view of the remarks that follow.

STATUS OF CLAIMS

Claims 21, 22, 24, 25 and 29-53 are pending.

Claims 21, 24, 25, 29-42 and 52 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Millet et al. (USP 6,865,613).

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention provides for a method of providing a communication service to a correspondent terminal (wherein a proxy correspondent node provided between the correspondent terminal and a home agent) that communicates with a mobile terminal, wherein the method conducted by the proxy correspondent node comprises the steps of: hunting binding information about the mobile terminal, wherein the binding information provides a correspondence between an IP address of the mobile terminal and an IP address of a foreign agent that is accommodating the mobile terminal, with the binding information being transferred from the home agent of the mobile terminal to the correspondent terminal; processing and storing the binding information for the correspondent terminal; and processing a data packet from the correspondent terminal to the mobile terminal based on the binding information.

The present invention also provides for a proxy correspondent node device that conducts a communication service, wherein the proxy correspondent node device comprises means for setting a visit state flag to an active state when the correspondent terminal is transmitting packets during a registration process; means for monitoring the flow of packets transmitted from the correspondent terminal; means for setting the visit state flag to a pending state when the monitoring does not detect a packet flow for a predetermined time period; means for setting the visit state flag to a left area state when the monitoring does not detect a packet flow for another predetermined time period and the visit state flag is in the pending state; means for setting the visit state flag to the active state when the monitoring detects a packet flow when the visit state flag is in the pending state and before another predetermined time period; and means for deleting a visitor list entry for the correspondent terminal based on a service profile and binding cache information relating to path optimization when the visit state flag is in the left area state.

The present invention also provides for a proxy communication unit comprising a controller and a message handling unit. The controller authenticates the correspondent terminal, verifies and sets the services to be provided to the correspondent terminal and issues a communication authorization to the correspondent terminal. The message handling unit generates and receives packets to and from distributed physical nodes to exchange information required in providing the communication services for the correspondent terminal that is communicating with the mobile terminal, including verifying and setting the services to be provided to the correspondent terminal among the distributed physical nodes. The controller further comprises a cache management unit that stores and manages a binding cache corresponding to the correspondent terminal by detecting binding information transmitted from the home agent to the correspondent node and, furthermore, the binding cache contains

information of the mobile terminal, wherein the information provides a correspondence between an IP address of the mobile terminal and an IP address of a foreign agent that is accommodating the mobile terminal.

REJECTIONS UNDER 35 U.S.C. § 102

Claims 21, 24, 25, 29-42 and 52 stand rejected under 35 U.S.C. §102(e) as being anticipated by Millet et al. (USP 6,865,613). Applicants wish to note that although, on page 2 of the office action of 4/20/2005, the examiner states that claims only "claims 21, 24-25, 29-42 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Miller et al., U.S. Patent No. 6,865,613," the subsequent paragraphs also address the rejections with respect to claims 43-51 and 53 as being anticipated by the Millet et al. reference. Hence, applicants have addressed the office action under the assumption that all the pending claims (i.e., claims 21, 24, 25, 29-53) are rejected as being anticipated by the Millet et al. reference. To be properly rejected under 35 U.S.C. §102(e), each and every element of the claims must be disclosed in a single cited reference. The applicants, however, contend that the presently claimed invention cannot be anticipated in view of the Millet et al. reference.

Millet et al. provide for an address conversion method for converting an IP address allocated to a mobile terminal user. Specifically, Millet et al. teach an apparatus configured to provide a network connection for a visiting node at a remote network (the visiting node being configured to connect through a home network that is remote from the remote network), wherein the apparatus comprises: one or more processors and a memory in communication with at least one of the processors.

According to Millet et al., at least one of the processors and the memory are configured to provide an address translation list including one or more translation entries, each specifying a home IP address of the visiting node and a globally unique outside address, wherein the globally unique outside address is provided by the remote network and the home IP address is the IP address of the visiting node on its home network, and wherein at least one of the processors and the memory is configured to act as a remote network node on the remote network for a visiting node, with the remote network node behaving as the default gateway for the visiting node by responding to a message from the visiting node addressed to a default gateway on the home network of the visiting node.

With respect to claims 21 and 52, the examiner cites column 4, lines 4-41, column 6, lines 15-67, and column 17, lines 4-22 of the Millet et al. reference as teaching the limitation of transferring binding information from a home agent of the mobile terminal to the correspondent terminal. Applicants wish to note the citation with respect to column 17, lines 4-22 appears to be erroneous as the patent only has a total of 16 columns. Applicants respectfully request clarification from the examiner regarding this citation.

Column 4, lines 4-41 of the Millet et al. reference merely teaches, for the purposes of preservation, the association "of the visiting node's home address and the globally unique outside address," the creation of "a translation entry specifying the home IP address of the visiting node and the globally unique outside address".

Similarly, column 6, lines 15-67 of the Millet et al. reference teach the above-mentioned flexible address translation system (see element number 111 of figure 2a in Millet et al.), whereby the translation system 111 maintains a pool of outside IP addresses 113.

Conspicuously absent in the citations, or the entire Millet et al. reference, is a teaching for "binding information" that provides a correspondence between an IP address of the mobile terminal and an IP address of a foreign agent that is accommodating the mobile terminal. Also, conspicuously absent in the citations, or the entire Millet et al. reference, is a teaching for transferring the binding information from the home agent of the mobile terminal to the correspondent terminal. Also, absent in the citations is a teaching for processing a data packet from the correspondent terminal to the mobile terminal based on the binding information.

If the examiner still feels that that the limitations of applicants' binding information, the transference of such binding information, and the processing data packets based on binding information are disclosed in the Millet et al. reference, applicants respectfully remind the examiner that it is the duty of the examiner to specifically point out each and every limitation of a claim being rejected as per §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P., which explicitly states that "the particular part relied on must be designated" and "the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified".

Since the examiner's citations and the entire Millet et al. reference fails to teach many of the limitations of claims 21 and 52, applicants respectfully submit that the Millet et al. reference neither anticipates nor renders obvious claims 21 and 52. Furthermore, the above-mentioned

arguments with respect to independent claims 21 and 52 substantially apply to dependent claims 22 and 53 as they inherit all the limitations of the claim from which they depend. Hence, applicants respectfully request the examiner to withdraw the rejections with respect to claims 21-22 and 52-53.

With respect to claims 24 and 25, the examiner cites column 4, lines 4-41, column 6, lines 15-67, column 17, lines 4-22, and column 5, lines 9-33 of the Millet et al. reference as teaching the limitations of claim 24 and 25. As noted above, applicants wish to note the citation with respect to column 17, lines 4-22 appears to be erroneous as the patent only has a total of 16 columns. As above, applicants respectfully request clarification from the examiner regarding this citation.

Furthermore, as mentioned above, column 4, lines 4-41 of the Millet et al. reference merely teaches, for the purposes of preservation, the association "of the visiting node's home address and the globally unique outside address," the creation of "a translation entry specifying the home IP address of the visiting node and the globally unique outside address" and column 6, lines 15-67 of the Millet et al. reference teach the above-mentioned flexible address translation system 111, whereby the translation system 111 maintains a pool of outside IP addresses 113.

Applicants wish to note that the entire Millet et al. reference fails to provide an explicit or implicit recitation of a "means for setting the visit state flag". Contrary to the examiner's claim, the citations and the entire Miller et al. reference fails to even teach setting of a flag.

Applicants respectfully submit that the examiner's citations and the entire Millet et al. reference fails to at least provide for the following limitations of claims 24 and 25:

- means for setting a visit state flag to an active state when the correspondent terminal is transmitting packets during a registration process;

- means for setting the visit state flag to a pending state when the monitoring does not detect a packet flow for a predetermined time period;

- means for setting the visit state flag to a left area state when the monitoring does not detect a packet flow for another predetermined time period and the visit state flag is in the pending state;

- means for setting the visit state flag to the active state when the monitoring detects a packet flow when the visit state flag is in the pending state and before the another predetermined time period; and

- means for deleting a visitor list entry for the correspondent terminal based on a service profile and binding cache information relating to path optimization when the visit state flag is in the left area state.

If the examiner still feels that that such limitations of claims 24 and 25 are disclosed in the Millet et al. reference, applicants respectfully remind the examiner that it is the duty of the examiner to specifically point out each and every limitation of a claim being rejected as per §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P., which explicitly states that "the particular part relied on must be designated" and "the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified".

Since the examiner's citations and the entire Millet et al. reference fails to teach many of the limitations of independent claims 24 and 25, applicants respectfully submit that the Millet et al. reference neither anticipates nor renders obvious claims 24 and 25. Hence, applicants respectfully request the examiner to withdraw the rejections with respect to claims 24 and 25.

With respect to claims 29 and 42, the examiner cites column 4, lines 9-55, column 6, lines 15-67, and column 17, lines 4-22 of the Millet et al. reference as teaching the limitation of applicants' independent claims 29 and 42. As noted above, applicants wish to note the citation with respect to column 17, lines 4-22 appears to be erroneous as the patent only has a total of 16 columns. As above, applicants respectfully request clarification from the examiner regarding this citation.

As mentioned above, column 4 of the Millet et al. reference merely teaches, for the purposes of preservation, the association "of the visiting node's home address and the globally unique outside address," the creation of "a translation entry specifying the home IP address of the visiting node and the globally unique outside address" and column 6 of the Millet et al. reference expands on the above-mentioned flexible address translation system 111, whereby the translation system 111 maintains a pool of outside IP addresses 113.

Conspicuously absent in the examiner's citations and the entire Millet et al. reference is a teaching or suggestion for a controller having a cache management unit that stores and manages a binding cache corresponding to the correspondent terminal by detecting binding information transmitted from the home agent to the correspondent node. Furthermore, the examiner's citations and the entire Millet et al. reference fail to teach or suggest a binding cache contains

information of the mobile terminal, wherein the information provides a correspondence between an IP address of the mobile terminal and an IP address of a foreign agent that is accommodating the mobile terminal.

If the examiner still feels that that the limitations of applicants' controller, cache management unit and binding cache are disclosed in the Millet et al. reference, applicants respectfully remind the examiner that it is the duty of the examiner to specifically point out each and every limitation of a claim being rejected as per §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P., which explicitly states that "the particular part relied on must be designated" and "the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified".

Since the examiner's citations and the entire Millet et al. reference fails to teach many of the limitations of independent claim 29 and 42, applicants respectfully submit that the Millet et al. reference neither anticipates nor renders obvious claim 29 and 42. Furthermore, the above-mentioned arguments with respect to independent claims 29 and 42 substantially apply to dependent claims 30-32, 34-41, 43, and 45-51 as they inherit all the limitations of the claim from which they depend. Hence, applicants respectfully request the examiner to withdraw the rejections with respect to claims 29-32, 34-41, 42-43, and 45-51.
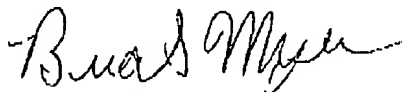
SUMMARY

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicant's presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

This amendment is being filed with a petition for extension of time. The Commissioner is hereby authorized to charge the petition fee, as well as any deficiencies in the fees provided to Deposit Account No. 50-1290.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact applicant's representative at the below number.

Respectfully submitted,

Brian S. Myers
Registration No. 46947

Katten Muchin Rosenman LLP
575 Madison Ave
New York, NY 10022
212-940-8800
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